

What is claimed is:

1. A semiconductor integrated circuit device comprising:

a terminal; and

5 a first capacitance adjusting section which is connected to a wiring between said terminal and a protection resistor in front stage of an internal circuit,

10 wherein said first capacitance adjusting section adjusts terminal capacitance of said terminal, based on capacitance of said first capacitance adjusting section.

2. The semiconductor integrated circuit device 15 according to Claim 1, further comprising:

a protection circuit which is connected to said wiring between said terminal and said first capacitance adjusting section and protects said internal circuit.

20 3. The semiconductor integrated circuit device according to Claim 1, wherein said first capacitance adjusting section comprises a first adjusting capacitor which adjusts said terminal capacitance,

said first adjusting capacitor comprises:

a first semiconductive portion which is composed of a first well region formed in a substrate with said internal circuit and having a conductive type opposite to that of said substrate, and

5 a second semiconductive portion which is opposite to said first semiconductive portion and is composed of a first diffusion layer region formed in said first well region and having the same conductive type as that of said substrate.

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4. The semiconductor integrated circuit device according to Claim 3, further comprising:

a well potential control section,

15 wherein said first capacitance adjusting section further comprises a second adjusting capacitor which adjusts said terminal capacitance based on controlling a well region potential by said well potential control section,

said second adjusting capacitor comprises:

20 a third semiconductive portion which is composed of a second well region formed in said substrate and having a conductive type opposite to that of said substrate,

a fourth semiconductive portion which is opposite

to said third semiconductive portion and is composed of a second diffusion layer region formed in said second well region and having the same conductive type as that of said substrate, and

5 said well potential control section controls said well region potential of said second well region.

5. The semiconductor integrated circuit device according to Claim 4, wherein said well potential 10 control section comprises:

 a plurality of resistors which are connected in series to each other between two potential electrodes; and

15 a plurality of switches each of which is connected in parallel to each of said plurality of resistors, said well potential control section controls said well region potential by controlling each one of said plurality of switches.

20 6. The semiconductor integrated circuit device according to Claim 5, further comprising:

 a plurality of said terminals; and
 a plurality of said first capacitance adjusting sections, each of which is connected to said wiring

between each of said plurality of terminals and each of a plurality of said protection resistors,

wherein said well potential control section controls each of a plurality of said well region
5 potentials.

7. The semiconductor integrated circuit device according to Claim 2, wherein said first capacitance adjusting section comprises a first adjusting capacitor
10 which adjusts said terminal capacitance,

said first adjusting capacitor comprises:

a first semiconductive portion which is composed of a first well region formed in a substrate with said internal circuit and having a conductive type opposite
15 to that of said substrate, and

a second semiconductive portion which is opposite to said first semiconductive portion and is composed of a first diffusion layer region formed in said first well region and having the same conductive type as that
20 of said substrate.

8. The semiconductor integrated circuit device according to Claim 7, further comprising:

a well potential control section,

wherein said first capacitance adjusting section further comprises a second adjusting capacitor which adjusts said terminal capacitance based on controlling a well region potential by said well potential control
5 section,

 said second adjusting capacitor comprises:
 a third semiconductive portion which is composed of a second well region formed in said substrate and having a conductive type opposite to that of said
10 substrate,

 a fourth semiconductive portion which is opposite to said third semiconductive portion and is composed of a second diffusion layer region formed in said second well region and having the same conductive type as that
15 of said substrate, and

 said well potential control section controls said well region potential of said second well region.

9. The semiconductor integrated circuit device
20 according to Claim 8, wherein said well potential control section comprises:

 a plurality of resistors which are connected in series to each other between two potential electrodes;
 and

a plurality of switches each of which is connected in parallel to each of said plurality of resistors, said well potential control section controls said well region potential by controlling each one of said 5 plurality of switches.

10. The semiconductor integrated circuit device according to Claim 9, further comprising:

a plurality of said terminals; and
10 a plurality of said first capacitance adjusting sections each of which is connected to each of a plurality of said wirings between each of said plurality of terminals and each of a plurality of said protection resistors.

15 wherein said well potential control section controls each of a plurality of said well region potentials.

11. The semiconductor integrated circuit device 20 according to Claim 1, further comprising:

a second capacitance adjusting section which is connected to a wiring between said first capacitance adjusting section and said internal circuit, wherein said second capacitance adjusting section adjusts said

terminal capacitance based on capacitance of said second capacitance adjusting section; and

a switching control section which controls said capacitance of said second capacitance adjusting
5 section.

12. The semiconductor integrated circuit device according to Claim 11, wherein said switching control section comprises:

10 a plurality of switches each of which outputs signal potentials corresponding to turn on and off of said each of plurality of switches, and

a plurality of signal holding sections each of which holds corresponding each of a plurality of said
15 signal potentials,

wherein said switching control section controls said capacitance of said second capacitance adjusting section based on said plurality of signal potentials.

20 13. The semiconductor integrated circuit device according to Claim 12, wherein said second capacitance adjusting section comprises:

a plurality of third adjusting capacitors each of which capacitance is variable based on corresponding

said each of said plurality of signal potentials,

 wherein said second capacitance adjusting section
adjusts said plurality of third adjusting capacitors
based on said plurality of signal potentials.

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14. The semiconductor integrated circuit device
according to Claim 13, further comprising:

 a plurality of said terminals; and

10 a plurality of said second capacitance adjusting
sections each of which is connected to each of a
plurality of said wirings between each of said plurality
of said first capacitance adjusting sections and each
of a plurality of said internal circuits,

15 wherein said switching control section controls
each of a plurality of said capacitances of said
plurality of second capacitance adjusting sections.

16. The semiconductor integrated circuit device
according to Claim 3, further comprising:

20 a second capacitance adjusting section which is
connected to a wiring between said first capacitance
adjusting section and said internal circuit, wherein
said second capacitance adjusting section adjusts said
terminal capacitance based on capacitance of said

second capacitance adjusting section; and
a switching control section which controls said
capacitance of said second capacitance adjusting
section.

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16. The semiconductor integrated circuit device
according to Claim 15, wherein said switching control
section comprises:

10 a plurality of switches each of which outputs
signal potentials corresponding to turn on and off of
said each of plurality of switches, and

15 a plurality of signal holding sections each of
which holds corresponding each of a plurality of said
signal potentials,

wherein said switching control section controls
said capacitance of said second capacitance adjusting
section based on said plurality of signal potentials.

17. The semiconductor integrated circuit device
20 according to Claim 16, wherein said second capacitance
adjusting section comprises:

a plurality of third adjusting capacitors each of
which capacitance is variable based on corresponding
said each of said plurality of signal potentials,

wherein said second capacitance adjusting section
adjusts said plurality of third adjusting capacitors
based on said signal potential.

5 18. The semiconductor integrated circuit device
according to Claim 17, further comprising:

 a plurality of said terminals; and
 a plurality of said second capacitance adjusting
 sections each of which is connected to each of a
10 plurality of said wirings between each of said plurality
 of said first capacitance adjusting sections and each
 of a plurality of said internal circuits ,

 wherein said switching control section controls
 each of a plurality of said capacitances of said
15 plurality of second capacitance adjusting sections.